

***REMARKS***

This is a full and timely response to the outstanding Office action mailed November 12, 2004. Upon entry of the amendments in this response claims 18-49 are pending. More specifically, claims 18, 31, and 35 are amended. These amendments are specifically described hereinafter. It is believed that the foregoing amendments add no new matter to the present application.

**I. Present Status of Patent Application**

The disclosure is objected to because the embedded hyperlink listed on Page 1, line 28 is impermissible and requires deletion. Claims 19-34 and 36-49 are rejected under 35 U.S.C. 101 as allegedly claiming the same invention as that of claims 1-30 of prior U.S. Patent No. 6,438,139. Claims 18 and 35 are rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1 and 7 of U.S. Patent No. 6,438,139. Claims 18-21, 31, 34-38 and 47 are rejected under 35 U.S.C. 102(e) as allegedly being anticipated by Choi *et al.* (U.S. Patent No. 6,195,388) (hereinafter "Choi"). Claims 18-19 and 34-36 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Rao (U.S. Patent No. 5,506,844) in view of Auyeung *et al.* (U.S. Patent No. 5,677,969).

**II. Miscellaneous Issues**

The specification has been amended to overcome the hyperlink rejection by deleting the hyperlink reference. Applicants respectfully request the objection be withdrawn.

In addition, a terminal disclaimer has been filed herewith, and claims have been amended as shown above. Accordingly, Applicants submit that there are no double patenting issues regarding U.S. Patent No. 6,438,139.

### III. Rejections Under 35 U.S.C. §102(e)

#### A. Claims 18-21, 31, 34-38, and 47

The Office Action rejects claims 18-21, 31, 34-38, and 47 under 35 U.S.C. 102(e) as allegedly being anticipated by Choi *et al.* (U.S. Patent No. 6,195,388) (hereinafter "*Choi*"). For the reasons set forth below, Applicants respectfully traverse the rejection.

The specification has been amended to properly claim priority to U.S. Patent No. 6,052,384 with a filing date of March 21, 1997, which predates *Choi*. Therefore, *Choi* is not applicable under §102(e) and the rejections should be withdrawn.

### VI. Rejections Under 35 U.S.C. §103(a)

#### A. Claims 18-19 and 34

The Office Action rejects claims 18-19 and 34 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Rao* (U.S. Patent No. 5,506,844) in view of *Auyeung* (U.S. Patent No. 5,677,969). For the reasons set forth below, Applicants respectfully traverse the rejection.

#### **Independent claim 18 recites:**

18. A multiplexer for multiplexing a plurality of variable-rate bit streams onto a medium, the multiplexer comprising:

a receiver for receiving the bit streams;

a transmitter coupled to the receiver for transmitting the bit streams on the medium, each bit stream receiving a dynamically-variable portion of the bandwidth of the medium; and

a bandwidth portion controller coupled between the transmitter and the receiver for dynamically determining the variable portion for each bit stream using an output rate that is obtained by *applying a standardized model of a receiver for the bit stream to information read from the bit stream.*

For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features/steps of the claim at issue. *See, e.g., In re Dow Chemical.*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981). Applicant respectfully submits that independent claim 18 is allowable for at least the reason that neither *Rao* nor *Auyeung* disclose, teach, or suggest at least **applying a standardized model of a receiver for the bit stream to information read from the bit stream**. The model in *Auyeung* is not a standardized model. Conversely, the model in *Auyeung* is based on received data from an encoder. “First, a plurality of quantized video bits is received from an encoder. The plurality of quantized video bits correspond to a video frame type. Then, a virtual buffer is created, in a rate controller, to model fullness of a decoder buffer, based on the quantized video bits, to produce a virtual buffer fullness.” *Auyeung*, col. 2, lines 46-55. *Rao* does not overcome this deficiency.

As shown above, the cited combination of references does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 18. Notwithstanding, no such teaching can be identified anywhere within these references. Therefore, the rejection should be withdrawn. Additionally and notwithstanding the analysis hereinabove, there are other reasons why claim 18 is allowable.

Because independent claim 18 is allowable over the cited art of record, dependent claims 18-19 and 34 (which depend from independent claim 18) are allowable as a matter of law for at least the reason that dependent claims 18-19 and 34 contain all the steps/features of independent claim 18. *See Minnesota Mining and Manufacturing Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002) *Jeneric/Pentron, Inc. v. Dillon Co.*, 205 F.3d 1377, 54 U.S.P.Q.2d 1086 (Fed. Cir. 2000); *Wahpeton Canvas Co. v. Frontier Inc.*, 870 F.2d 1546, 10 U.S.P.Q.2d 1201 (Fed. Cir. 1989). Therefore, the rejection to claims 18-19 and 34 should be withdrawn and the claims allowed.

Additionally and notwithstanding the foregoing reasons for allowability of independent claim 18, dependent claims 18-19 and 34 recite further features and/or combinations of features, as are apparent by examination of the claims themselves, that are patently distinct from the cited art of record. Hence there are other reasons why dependent claims 18-19 and 34 are allowable.

B. Claims 35-36

The Office Action rejects claims 35-36 under 35 U.S.C. §103(a) as allegedly being unpatentable over *Rao* (U.S. Patent No. 5,506,844) in view of *Auyeung* (U.S. Patent No. 5,677,969). For the reasons set forth below, Applicant respectfully traverses the rejection.

**Independent claim 35** recites:

35 A method of multiplexing a plurality of variable-rate bit streams onto a medium, the method comprising the steps of:

- receiving the bit streams;
- for each bit stream, dynamically obtaining an output rate by ***applying a standardized model of a receiver for the bit stream to information read from the bit stream***;
- for each bit stream, using the output rate determined for the bit stream to dynamically determine a variable portion of the bandwidth of the medium; and
- for each bit stream, outputting the bit stream to the medium using the bit stream's variable portion of the bandwidth.

For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features/steps of the claim at issue. *See, e.g., In re Dow Chemical.*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981). Applicant respectfully submits that independent claim 35 is allowable for at least the reason that neither *Rao* nor *Auyeung* disclose, teach, or suggest at least ***applying a standardized model of a receiver for the bit stream to information read from the bit stream***. The model in *Auyeung* is not a standardized model. Conversely, the model in *Auyeung* is based on received data from an encoder. "First, a plurality of quantized video bits is received from an encoder. The plurality of quantized video bits correspond to a video frame type. Then, a virtual buffer is created, in a rate controller, to model fullness of a decoder buffer, based on the quantized video bits, to produce a virtual buffer fullness." *Auyeung*, col. 2, lines 46-55. *Rao* does not overcome this deficiency.

As shown above, the cited combination of references does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 35. Notwithstanding, no such teaching can be identified anywhere within these references. Therefore, the rejection should be withdrawn. Additionally and notwithstanding the analysis hereinabove, there are other reasons why claim 35 is allowable.

Because independent claim 35 is allowable over the cited art of record, dependent claim 36 (which depends from independent claim 35) is allowable as a matter of law for at least the reason that dependent claim 36 contains all the steps/features of independent claim 35. See *Minnesota Mining and Manufacturing Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002); *Jeneric/Pentron, Inc. v. Dillon Co.*, 205 F.3d 1377, 54 U.S.P.Q.2d 1086 (Fed. Cir. 2000); *Wahpeton Canvas Co. v. Frontier Inc.*, 870 F.2d 1546, 10 U.S.P.Q.2d 1201 (Fed. Cir. 1989). Therefore, the rejection to claim 36 should be withdrawn and the claim allowed.

Additionally and notwithstanding the foregoing reasons for allowability of independent claim 35, dependent claim 36 recites further features and/or combinations of features, as are apparent by examination of the claims themselves, that are patently distinct from the cited art of record. Hence there are other reasons why dependent claim 36 is allowable.

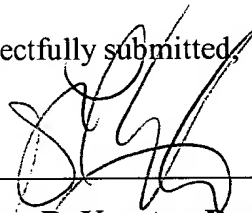
## **VII. Cited Art Made of Record**

The cited art made of record have been considered, but are not believed to affect the patentability of the presently pending claims. Other statements not explicitly addressed herein are not admitted.

**CONCLUSION**

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 18-49 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

Respectfully submitted,



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